



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Hm

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,167	12/30/2003	Jean Helen Brittain	GEMS8081.207	7817
27061	7590	06/07/2004	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, LLC (GEMS) 14135 NORTH CEDARBURG ROAD MEQUON, WI 53097			FETZNER, TIFFANY A	
		ART UNIT	PAPER NUMBER	
			2859	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/749,167	BRITTAINE, JEAN HELEN
	Examiner	Art Unit
	Tiffany A Fetzner	2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 December 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 31-50 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 31-50 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 30 December 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration Defective

1. The instant application is a continuation of US serial application number 09/682,699 which is in turn a CIP of US serial application number 09/681,420. The examiner notes that only the 09/681,420 application is listed on the oath/declaration of the instant application, for the purposes of priority, if applicant desires priority from the 09/682,699 application, the 09/682,699 application must also be listed on the oath/declaration. A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 31-50** are rejected under **35 U.S.C. 103(a)** as being unpatentable over **Kruger et al.**, US patent application Publication 2002/0173715 A1 published November 21st 2002; filed November 26th 2001, with an effective US prior art date of April 9th 2001 from the US provisional application 60/282,555 filed April 9th 2001. The examiner is using column and line citations from the US 2002/0173715 A1 Publication, because this is a publicly available document. [See also the Notice of references cited, where a courtesy copy of the US provisional application 60/282,555 has been provided to applicant.]

5. With respect to **Claim 31**, **Kruger et al.**, teaches and suggests "A method of imaging large volumes without resulting slab-boundary artifacts comprising: defining a desired FOV larger than an optimal imaging volume of an MR scanner;" [See **Kruger et al., abstract** page 1 paragraphs 0010, page 2 paragraphs 0019,] The **Kruger et al.**, reference lacks explicitly teaching the term "optimal imaging volume", however **Kruger et al.**, teaches a 3D MR acquisition [See paragraph [0020] on page 2] and that the FOV capable of being imaged is many times larger than the static field of view allowed by a typical MRI scanner. [See page 2 paragraphe [0019]. Therefore the examiner is interpreting "the static field of view allowed by a typical MRI scanner" to be intrinsically equivalent to the applicant's claimed "optimal imaging volume", because a 3D field of view is a 3D imaging volume, and the amount allowed corresponds to applicant's claimed "optimal" amount. It would have been obvious to one of ordinary skill in the art, at the time that the invention was made that the **Kruger et al.**, reference, suggests an "optimal imaging volume, even though the exact terminology is lacked because the

Kruger et al., reference, strives to obtain optimal imaging throughout the reference. [See paragraph [0010] through paragraph [0063]].

6. The **Kruger et al.**, reference also teaches, shows, and suggests “selecting a slab thickness in a first direction that is smaller than the desired FOV and within the optimal imaging volume of the MR scanner;” [See **Kruger et al.**, paragraph [0020] where slab 12 figure 3 is smaller than the desired FOV (i.e. FOV_{tot}) and within the “optimal imaging volume” (i.e. FOV_x); Figures 3, 4, 5, 6; paragraph [0020] through [0022]; paragraphs [0037] through [0038] paragraphs [0060 and [0061]] “and continuously moving one of the optimal imaging volume and an imaging object in the first direction while repeatedly exciting and encoding spins with readout in the first direction to acquire data that is restricted to the selected slab thickness until at least one image of the FOV can be reconstructed”. [See **Kruger et al.**, paragraph [0010] through paragraph [0063] as this limitation itself is the entire focus of the **Kruger et al.**, reference.].

7. **Kruger et al.**, also teaches, and suggests the steps of “processing MR data to account for accrued phase resulting from table velocity; [See **Kruger et al.**, paragraphs [0041] through [0063]] “transforming MR data in a z-direction;” [See **Kruger et al.**, page 2 paragraph [0023]] “correcting the MR data for spatial variations in the magnetic field in the direction of motion” [See **Kruger et al.**, [0024] through [0063]] “removing unnecessary data at the beginning and ending of each acquisition;”, is suggested from the partial acquisition scheme of paragraphs [0052 through [0063]; and “sorting, interpolating, and aligning the transformed MR data to match anatomic locations in the

first direction.” [See **Kruger et al.**, paragraph [0023] through [0031]; paragraphs [0041] through [0063]; and Figure 6]

8. With respect to **Claim 32**, **Kruger et al.**, teaches, “reconstructing an MR image by transforming the z-transformed MR data in remaining transverse dimension(s).” [See **Kruger et al.**, page 2 paragraph [0023] The same reasons for rejection, and obviousness that apply to **claim 31**, also apply to **claim 32**.

9. With respect to **Claim 33**, **Kruger et al.**, teaches, and suggests “griddling the transformed MR data in dimension(s) perpendicular to the first direction to reconstruct an MR image. [See **Kruger et al.**, paragraph [0023] through [0031]; paragraphs [0041] through [0063]; and Figure 6] . The same reasons for rejection, and obviousness that apply to **claim 31**, also apply to **claim 33**.

10. With respect to **Claim 34**, **Kruger et al.**, teaches, shows and suggests “the step of using additional MR data to track motion of one of the optimal imaging volume and an imaging object”. [See **Kruger et al.**, paragraph [0039] through paragraph [0063] abstract; Figures 3 through 6;] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 34**.

11. With respect to **Claim 35**, **Kruger et al.**, teaches, and suggests “reconstructing the acquired data to form at least one of a 2D image and a 3D image.” [See **Kruger et al.**, page 2 paragraphs [0020], [0023], and [0039]-[0043] where the use of two-dimensional or three-dimensional Fourier image reconstruction directly suggests the reconstruction of “at least one of a 2D image and a 3D image”.] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 35**

12. With respect to **Claim 36**, **Kruger et al.**, teaches, and suggests “the step of using a portion of the acquired MR data to track motion of one of the optimal imaging volume and an imaging object.” [See **Kruger et al.**, page 4 paragraph 0039 through page 5 paragraph 0056] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 36**.

13. With respect to **Claim 37**, **Kruger et al.**, teaches, shows, and suggests “restricting data acquisition by encoding and filtering data so as to acquire data that is limited to the selected slab thickness.” [See **Kruger et al.**, page 3 paragraph [0037], page 5 paragraph [0060]; page 2 paragraphs [0020] and [0021] Figures 3, 4, 5, and 6] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 37**.

14. With respect to **Claim 38**, **Kruger et al.**, suggests “restricting excitation in at least one direction other than the first direction.”, because in **Kruger et al.**, excitation is restricted to slab 12 which has defined boundaries in the x, y, and z directions defined by the pulse sequence and shown in Figure 3] [See **Kruger et al.**, figure 3 and page 3 paragraph [0037]]. The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 38**.

15. With respect to **Claim 39**, **Kruger et al.**, teaches, shows, and suggests that “the first direction is defined as a z-direction.”, because slab selection pulse 222 occurs along the z gradient axis of the pulse timing diagram of figure 2.[See **Kruger et al.**, figure 3 and page 3 paragraph [0037] and figure 2.] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 39**.

16. With respect to **Claim 40**, **Kruger et al.**, teaches, shows, and suggests “each MR data acquisition during continuous movement includes acquiring all k-space data in a direction of motion of a patient table for a selected subset of transverse k-space data.” [See **Kruger et al.**, page 3 paragraph [0039] through page 6 paragraph [0063]; abstract, paragraphs [0019 through [0031]] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 40**.

17. With respect to **Claim 41**, **Kruger et al.**, teaches, shows, and suggests “reducing, exam time by imaging during table motion.” [See **Kruger et al.**, page 5 paragraphe [0061];]. The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 41**.

18. With respect to **Claim 42**, **Kruger et al.**, teaches, shows, and suggests “processing the set of MR data using a griddling reconstruction”. [See **Kruger et al.**, paragraph [0023] through [0031]; paragraphs [0041] through [0063]; and Figure 6] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 42**.

19. With respect to **Claim 43**, **Kruger et al.**, teaches, shows, and suggests “the step of maintaining a position of slab thickness fixed relative to a magnet of the MR scanner during imaging of the desired FOV and the continuous moving of one of the optimal imaging volume and the imaging object. [See **Kruger et al.**, page 1 paragraphs [0010 through 0012] page 2 paragraph [0023] through [0031]; page 4 paragraphs [0041] through page 6 paragraph [0063]; and Figure 6] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 43**.

20. With respect to **Claim 44**, **Kruger et al.**, teaches, shows, and suggests “applying gradient waveforms on an axis parallel to the first direction while acquiring imaging data.” [See **Kruger et al.**, page 2 paragraphs [0020] and page 3 paragraph [0037] in combination with figure 2] The same reasons for rejection, and obviousness that apply to **claim 31** also apply to **claim 44**.

21. With respect to **Claim 45**, **Kruger et al.**, teaches, and suggests “An MRI apparatus to acquire multiple sets of MR data with a moving table and reconstruct MR images without slab-boundary artifacts” [See abstract, paragraphs [0010] through [0011] and paragraphs [0019] through [0023]] “comprising: a magnetic resonance imaging (MRI) system having a plurality of gradient coils positioned about a bore of a magnet to impress a polarizing magnetic field, [See **Kruger et al.**, Figures 1, 2, page 2 paragraph [0019] through paragraph [0020] page 3 paragraph [0032] through [0034] “and an RF transceiver system and an RF switch controlled by a pulse module to transmit RF signals to an RF coil assembly to acquire MR images” [See **Kruger et al.**, Figure 1 page 3 paragraph [0035] through paragraph [0036] “a patient table movable fore and aft in the MRI system about the magnet bore” [See **Kruger et al.**, Figure 1, page 3 paragraph [0033], Figure 1] “and a computer” [See **Kruger et al.**, Figure 1 page 3 paragraph [0032] through [0035] **Kruger et al.**, teaches, and suggests that the computer is programmed to: “receive input defining a desired FOV larger than an optimal imaging volume of the MRI system;” for the same rejection reasons, and reasons for obviousness given in the rejection of **claim 31**, which need not be reiterated.

22. **Kruger et al.**, also shows and suggests the step of “accelerating the patient table to the constant velocity before a leading edge of the FOV reaches a slab fixed in position” (i.e. a 3D “sweet spot” for slab 12 of figure 3) “with respect to a magnet of the medical image device;” is suggested from the teachings of page 2 paragraph [0012] lines 1-5, page 2 paragraph [0019], page 4 paragraph [0040] through page 6 paragraph [0063].

23. Additionally, the apparatus, system, and processor of **Kruger et al.**, [See figure 1] “acquires full MR data with” frequency encoding / “readout in a direction of table motion; continuously move the patient table at the desired constant velocity while maintaining position of the fixed slab; and repeat the acquisition of full MR data for a number of table positions while the patient table is moving until an MR data set is acquired across the desired FOV to reconstruct an image of the FOV”, [See **Kruger et al.**, page 3 paragraph [0032] through page 6 paragraph [0063]; page 2 paragraphs [0019] through [0023] Figures 1 through 6; abstract, page 2 paragraph [0012], and page 1 paragraphs [0010] and [0011] The examiner notes that the velocity teachings are found in paragraphs [0012], [0033] and [0040] through [0063]]. Additionally, the same reasons for rejection, that apply to **claim 31**, also apply to **claim 45** and need not be reiterated.

24. With respect to **Claim 46**, **Kruger et al.**, teaches, and suggests “the computer is further programmed to transmit magnetic gradient waveforms to encode a k-space trajectory that is uniform in kz” [See **Kruger et al.**, paragraphs [0034], [0037] – [0061] page 3 paragraph [0040] through page 6 paragraph [0063]; Figures 1-6] The same

reasons for rejection, that apply to **claims 31, 45**, also apply to **claim 46** and need not be reiterated.

25. With respect to **Claim 47**, which is the apparatus version of **claims 31, 32 and 39** combined **Kruger et al.**, teaches, and suggests that “the computer is further programmed to transform MR data with respect to z; align the z-transformed MR data to match anatomy across slab boundaries; and transform the z-transformed MR data with respect to at least one remaining dimension to reconstruct an MR image”, for the same reasons provided in the rejections of **claims 7, 13, and 14** of for rejection, that need not be reiterated therefore the same reasons for rejection, that apply to **claims 31, 32, 37 and 45**, also apply to **claim 47**.

26. With respect to **Claim 48**, this claim (i.e. “applying an RF pulse to excite a volume of interest; applying a k-space trajectory to encode the volume of interest, and filtering the acquired MR data to restrict the MR data to the defined fixed slab”) is just an equivalent version of method **claim 37** in apparatus form, therefore the same reasons for rejection, that apply to **claims 31, 37, and 45**, also apply to **claim 48** and need not be reiterated.

27. With respect to **Claim 49**, **Kruger et al.**, teaches, shows and suggests “acquiring all kz data for a selected subset of transverse k-space data,’ [See paragraph [0020], paragraph [0038], paragraph [0043] figures 3, 4, 6] “defining a set of magnetic field gradient waveforms to incrementally encode and acquire data in a given slab;” [See Paragraphs [0034]-[0038]; paragraphs [0019]-[0023]] “and applying the set of magnetic field gradient waveforms in a cyclic order.” [See Paragraphs [0034]-[0038]; paragraphs

[0019]-[0023]] The same reasons for rejection, that apply to **claims 31, 45**, also apply to **claim 49** and need not be reiterated.

28. With respect to **Claim 50**, **Kruger et al.**, teaches, shows and suggests a “computer program to control a medical image scanner and create images across scanning boundaries without boundary artifacts” [See figure 1, abstract, paragraphs [0010] through [0011] and paragraphs [0019] through [0023]] “the computer program having a set of instructions to control a computer to: select an FOV spanning an area greater than a predefined optimal imaging area of the medical image scanner;” for the same rejection reasons, and reasons for obviousness given in the rejection of **claim 31**, which need not be reiterated.

29. **Kruger et al.**, also teaches, shows and suggests the step of “determining a constant velocity by which to continuously translate a patient table about a magnet bore of the medical image scanner” [See page 5 paragraph [0057] through page 6 paragraph [0063], page 3 paragraph [0033] the last eight lines], “positioning the patient table at a location inferior or superior to the desired FOV;” [See figures 1, 5, 6, page 3 paragraph [0033] through page 6 paragraph [0063], and page 1 paragraph [0010] through page 2 paragraph [0012]]. The step of “accelerating the patient table to the constant velocity before a leading edge of the FOV reaches a slab fixed in position” ” (i.e. a 3D “sweet spot” for slab 12 of figure 3) “with respect to a magnet of the medical image device;” is suggested from the teachings of page 2 paragraph [0012] lines 1-5, page 2 paragraph [0019], page 4 paragraph [0040] through page 6 paragraph [0063]. The ability to “play out RF and gradient waveforms during patient table acceleration to establish steady-

state in the FOV;" is taught by **Kruger et al.**, in paragraphs [0057] through [0063]. The examiner notes that use of "steady-state" sequences with the continuous adjustable table velocity of the **Kruger et al.**, invention is taught on page 6 paragraph [0062].

30. Additionally, the method, apparatus, system, and processor of **Kruger et al.**, [See figure 1] "acquires full MR data with" frequency encoding / "readout in a direction of table motion; continuously move the patient table at the desired constant velocity while maintaining position of the fixed slab; and repeat the acquisition of full MR data for a number of table positions while the patient table is moving until an MR data set is acquired across the desired FOV to reconstruct an image of the FOV", [See **Kruger et al.**, page 3 paragraph [0032] through page 6 paragraph [0063]; page 2 paragraphs [0019] through [0023] Figures 1 through 6; abstract, page 2 paragraph [0012], and page 1 paragraphs [0010] and [0011] The examiner notes that the velocity teachings are found in paragraphs [0012], [0033] and [0040] through [0063]].

Applicability of Prior Art due to Lack of 37 CFR 1.131 declarations

31. The examiner notes that in the instant application, the earliest effective filing date for which applicant has original specification support is October 5th 2001, from the 09/682,699 parent application, which discloses continuous patient table motion / scanning. Applicant is not entitled to the date of March 30th 2001 from the 09/681,420 application because the instant application is a continuation of 09/682,699 which is a Continuation-in-part of the 09/681,420 application and in the original 09/681,420 application disclosure, there is no support for continuous patient table motion / scanning.

32. The effective dates of the **Kruger et al.**, and **Machida** references are before applicant's effective filing date of October 5th 2001. Therefore, the examiner recommends that applicant file the same 37 CFR 1.131 declarations, that applicant filed in the 09/682,699 parent application, to address the issue of each these references as applicable prior art, under 35 USC 102 and 35 USC 103.

33. In the rejections above the **Kruger et al.**, reference which has the earliest date has been applied, however **Machida** is also as equally applicable therefore the examiner recommends that applicant file a declaration for each reference, as was done in the parent application.

34. The **prior art made of record** and not relied upon is considered pertinent to applicant's disclosure.

A) **Machida** US Patent Application Publication US 2002/0115929 A1 published August 22nd 2002 which has an effective filing date available under 35 U.S.C. 102(e) of September 21st 2001 The examiner notes that this reference teaches and shows a two-dimensional application of applicant's **claims 31-50**, which like **Kruger et al.**, constitute a grounds of rejection under 35 USC 103 (a), since applicant's claims include two or three dimensionality. Because applicant is specifically using slabs or three-dimensional slices in the instant application's disclosure the **Kruger et al.**, reference has been applied, however the examiner still considers the **Machida** reference to be applicable relevant prior art, because it has an effective filing date of September 21st 2001.

- B)** **Yoshitome** Japanese Laid-open Patent Application (kokai) No. H6-304153 disclosed November 1st 1994. [The examiner is using the English version of this reference provided by applicant in the parent 09/682,699 application.]
- C)** **Yoshitome** Japanese Laid-open Patent Application (kokai) No. H6-311977 disclosed November 8th 1994. [The examiner is using the English version of this reference provided by applicant in the parent 09/682,699 application.]
- D)** **Hajnal** US patent 6,385,478 B1 issued May 7th 2002, filed December 21st 1999.
- E)** **Kuhara** US Patent Application Publication US 2002/0021128 A1 published February 21st 2002 which has an effective filing date available under 35 U.S.C. 102(e) of April 25th 2001.
- F)** **Dumoulin et al.**, US patent 6,584,337 B2 issued June 24th 2003, filed November 21st 2001.
- G)** **The Dietrich et al.**, article "Extending the coverage of true volume scans by continuous movement of the subject" by Olaf Dietrich and Joseph V. Hajnal from The Robert Steiner Magnetic Resonance Unit, Hammersmith Hospital, Du Cane Road, London W120HS 1999.
- H)** **Brittain** US Patent Application Publication US 2002/0140423 A1 published October 3rd 2002, which is the corresponding publication of applicant's instant application, therefore this application is not available as prior art, but is noted only for the purposes of a complete record.
- I)** **Brittain** US Patent Application Publication 2003/0011369 A1 published January 16th 2003, which is the corresponding publication of applicant's co-pending continuation

application, 10.235,454 and therefore is not available as prior art, but is noted only for the purposes of a complete record.

J) Wang US patent 5,928,148 issued July 27th 1999.

K) Kruger et al., US provisional application 60/282,555 filed April 9th 2001. [See the Notice of references cited. A courtesy copy of the US provisional application 60/282,555 has been provided to applicant.]

Conclusion

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

36. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached at (571) 272-2245. The **only official fax phone number** for the organization where this application or proceeding is assigned is (703) 872-9306.


TAF
May 29, 2004


Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800